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7 The Use of Information in the Policy Process: Are Social-Policy Experiments Worthwhile?

David S. Mundel

Social-policy experiments are very expensive and therefore should only be undertaken in very particular—and perhaps, relatively infrequent—situations. The intent of this article is to stimulate a discussion of the factors that increase the potential utility of experiments, so that in the future this information-gathering technology can be used more appropriately and effectively.

The factors that contribute to the high cost of experimentation are very clear—money, time, people, and institutions. Experiments cost a lot of *money* because the data-gathering activities are extensive—much data needs to be collected on many subjects—and because the cost of treatments is usually paid for by the research effort itself. Because social experiments usually involve increased benefits, the costs of research efforts usually include, at a minimum, the net benefit costs. Experiments are costly in terms of *time*—the time between the conception of an experiment and the availability of useful data is longer than in other research techniques. Often experiments have taken more than a decade to produce reliable and available evidence. Experiments are also costly in terms of *people and institutions*—there are very few policy researchers and research institutions that can successfully implement a large-scale social experiment. The use of these resources for experiments raises the question of whether these individuals and institutions might be more effectively utilized in other projects.

The factors that contribute to the potential utility of social experiments are less clear. Among the factors that are important are:

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- Can experiments answer the questions that are important to policy makers?
- If experiments can answer important policy questions, can the answers be understood?
- If experiments can provide understandable answers to important questions, can the answers alter the beliefs of policy makers?

7.1 Can Experiments Answer the Questions That Are Important to Policy Makers?

In order to assess the desirability of a potential social experiment, one must ask which questions are important in a policy debate and whether an experiment is a cost-effective means of answering them.

There are many types of questions or issues that influence the policy process and only some of them can be resolved using social experiments. The questions include: Is “A” a problem? (For example, are middle-income families experiencing difficulties in financing their children’s postsecondary education? And, if “A” is a problem, who has it? Why do they have it? Does it deserve social attention?

A great deal of social policy making depends on the answers to these questions, and these answers are not likely to be provided by social experiments. This does not mean that social science or policy research is unable to provide assistance in answering these questions, but only that nonexperimental methodologies, e.g., survey research and structural analysis, are more appropriate technologies.

Another set of questions that dominates the policy process relates to the implementation of programs or policies. The basic question one must ask is whether or not the institutions and individuals involved in a policy arena will act in such a way that a policy change will actually influence the intended policy target. For example, in the case of expanded federal assistance for college students from middle-income families one must ask whether state governments, banks and other lending institutions, colleges and universities and their financial-aid offices, philanthropic institutions/organizations, and others will “allow” a change in federal student-aid policy to result in a change in the level of student aid and pattern of prices facing students and their families. The fact that implementation problems and unforeseen or unintended consequences often limit or pervert the impact of well-intended policy choices is becoming increasingly apparent. Experiments can do very little to inform policy makers about this range of issues because the experimental treatments cannot be implemented on a broad enough scale or for a long enough time for these reactions and interactions to take place.¹ Policy demonstra-

1. The one effort to experimentally investigate this range of issues is the market-saturation segment of the housing-allowance experiments; the results of this attempt were neither satisfactory nor convincing.

tions are often implemented to investigate these phenomena but they, too, are often limited in duration and scope, and the character of the treatments is not sufficiently restricted to produce valid performance assessments.

A third set of questions relates to the behavioral consequences of policy treatments; for example, if middle-income students receive additional student assistance, will their college-enrollment rates or patterns change? This type of question is the natural focus of social experiments. However, structural and other analysis of survey data and theoretical analysis can also be used to answer these questions. Thus, one must ask, if these questions are the ones for which answers are sought, whether social experiments are the most cost-effective or appropriate means of answering them.

The potential realm of experimental techniques is thus quite limited. Of the three types of questions that are important to policy makers, only one appears amenable to experimental inquiry. Even that one type—behavioral consequences—is not solely approachable by experimental techniques.

7.2 If Experiments Can Answer Important Policy Questions, Can the Answers Be Understood?

If the purpose of a social experiment is to answer a “behavioral consequence” question that is important to policy makers, one must ask whether the answer will be understood by these individuals.

Policy makers are not skilled consumers of research. Policy makers are generally neither policy analysts, policy researchers, econometricians, nor statisticians. Consequently, their understanding of regression and other statistical-inference techniques is limited, and complex structural analyses that suggest that A “causes” B are rarely understood. If such an analysis suggests that the prior belief of the policy maker is true, policy makers may use the analysis to support their beliefs by repeating its conclusions, but their understanding of the analysis is itself limited. Policy makers with different beliefs than those supported by the statistical analysis will often discount the analysis because of its simplifying assumptions or because other studies show other results. These policy makers, too, do not generally understand the analysis itself.

One potential means of overcoming policy makers’ lack of statistical understanding is to rely on policy analysts to translate the complex answers into understandable terms. This strategy is effective when policy analysts exist in an issue area, when they are strong enough methodologically to understand the statistical analysis themselves, and when the policy analysts are effective communicators so that their translations of the research are understood. Regretably, these three conditions are often not met.

Experiments themselves are another potential means for overcoming the problems caused by policy makers' limited understanding of statistical inference and the lack of an extensive policy-analysis community. If properly conceived and analyzed, social experiments can result in simply stated and easily understood conclusions. In theory, the results of an experiment can be adequately presented in a simple $Y \times N$ table, where Y is the number of treatments (one of which is the control) and N is the number of population groups affected.

But most social experiments have not been conducted in such a way that their results are easily understood. Often many experiments are not carefully enough conceived or planned so that a simple presentation of results is possible. Consequently complex structural analysis is undertaken, and thus the potential ease of communication is lost. For example, the income-maintenance experiments required complex structural analysis in order to reach conclusions. Also, most experiments involve many treatment options, either because a lack of agreement about treatment options exists or because once an experiment is proposed, its scale attracts the interest of advocates for a wide variety of treatments. These expanded sets of treatments result in a need for structural analysis of results because the number of observations is not increased sufficiently for simple comparisons between a treatment and the control group and among treatment groups to be possible. Thus these expansions result in greater difficulties in communicating the experimental results, which compromises the potential ease of understanding that could result from focused experimentation.

On balance, experiments can be designed and implemented so that they can produce easily understood results. To do so will require careful experimental designs and strong limits on the number of treatments considered. These limits will need to be enforced throughout the development and implementation of future social experiments.

7.3 If Experiments Can Provide Understandable Answers to Important Policy Questions, Can the Answers Alter the Beliefs of Policy Makers?

Most policy makers appear to be very certain about the effectiveness of policy options that they are considering. This appearance results from many factors; for example, policy deliberations are often only publicized late in the decision-making process—after policy makers have made up their minds. Policy makers often seek to limit the appearance of uncertainty because they perceive that uncertainty and indecisiveness are politically unattractive. A further source of apparent certainty is policy makers' efforts to improve bargaining positions should compromises be required.

This certainty is luckily more apparent than real. In general most policy makers are uncertain about the impact of the policies about which they are deciding. This uncertainty is particularly true early in the policy development process before lines are clearly drawn and coalitions are formed. Uncertainty is also present where leadership has declined and party discipline is diminished, conditions that characterize the U.S. Congress at the present time.

When policy makers are uncertain about the impact of potential policies, the results of experiments and other research efforts can play a role in influencing their beliefs. In this regard, policy makers are classically Bayesian—entering a problem with an estimate of the likely outcome and an estimate of the variance or uncertainty surrounding the likely outcome. When the variance is greater, additional evidence is more highly valued and has a greater influence on expectations.

All of this suggests that experiments are most appropriate early in the policy-development process when decision makers are uncertain and uncommitted. This notion seems to run counter to the view (expressed above) that experiments should focus on a very small number of treatments because a narrow range of options may only become apparent after significant policy deliberations. The apparent contradiction can be resolved by a realization that even early in most policy debates the range of options can be narrowed to one or two treatments versus the status quo. Furthermore, given the time lag between the design of an experiment and the availability of its findings, starting early in the policy process seems to be the only way to have the information available prior to the resolution of the policy problem.

Experiments may also be appropriate at later stages in the policy process if decision makers are again or remain uncertain. Doubt, skepticism, and uncertainty are not solely present early in the policy process. Often uncertainty is greater after clearly desirable options have been tried and found wanting.

7.4 Will Experiments That Meet These Criteria Be Undertaken?

This question regarding the likelihood of further social experimentation confronts the policy-making and policy-research communities with important choices. For the policy community the issue is whether resources will be allocated early enough—prior to a policy question reaching public awareness or crisis proportions—and in a concentrated fashion so that social experiments can be both worthwhile and possible. The current skepticism regarding the potential role of social science research within the policy-making community and the concomitant desire to reduce social science funding suggest that this issue will be resolved

negatively. At the same time, the policy makers' uncertainty regarding the effectiveness of major policy options suggests that experiments could be influential.

For the policy-research community the issue is largely whether experiments can be focused on a narrow range of policy alternatives so that conclusive and understandable results can be obtained. The policy-research community may also oppose the concentration of resources needed to undertake experiments when the aggregate level of social science funding is declining. The capacity to concentrate resources during funding declines is limited.

In summary, although the criteria for designing influential social experiments are now more apparent and the potential utility of these experiments is now higher, the likelihood of further experimentation is probably declining.